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| 09/828,845      | 04/10/2001  | Glenn G. Bernard     | 19212.0003          | 6949             |

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| EXAMINER |
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LIM, KRISNA

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2153

DATE MAILED: 06/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/828,845

Applicant(s)

BERNARD ET AL.

Examiner

Krisna Lim

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-74 is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                   |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.                                                |

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1. Claims 1-74 are presented for examination.
2. The title of the invention is neither descriptive nor precise. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. The title should reflect the gist of or the improvement of the present invention.
3. There are typographical errors for claims 29, 32-37, 38, 40-43, 47-49, 51-52, 57-63, 65-68 and 72-74. For example, claim 29 is depended on claim 27 while it should be depended on claim 2 and claims 32-37, 38, 40-43 and 47-49 are depended on claim 30 while they should be depended on claim 31 instead. Similarly, claims 51-52, 57-63, 65-68 and 72-74 contain the same errors.
4. It is requested that a future correspondence from applicants have line numbering for the recitation of claims, if possible, as this will aid in the future correspondence from the examiner.
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
6. Claims 1-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin [U.S. Patent No. 6,061,562].
7. Martin et al. disclosed (e.g., see Figs. 1-8C) the invention substantially as claimed. Taking claim 1 as an exemplary claim, the reference disclosed a method of providing access to a mobile platform via at least one mobile node (airborne switching

node (ASN), cols. 2-3), each mobile node including at least two directional antennas (antennas of RF unit 246 of Fig. 6) for establishing communications link with at least two disparate node, comprising:

a) transmitting route data (packet) to a mobile node (col. 3 (line 45) to col. 5 (line 42), col. 13 (lines 12-14));

b) exchanging signal over links between a network interface (gateway 22) and the mobile node (ASN 14) (see col. 3 (line 45) to col. 5 (line 42)); wherein the mobile node steers its directional antenna (antenna of Fig. 6, orbit 30 of Fig. 1) based on the route data to establish the links with the network interface (gateway device) and the mobile platform (subscriber devices) (col. 3 (line 45) to col. 5 (line 42)).

8. Martin disclosed the ASN having a phased array antenna that electronically directs beams to predefined geographic cells in the service region and the ASN to include a memory that stored an association between beams and serviced cells, and a packet switch that accesses this memory to compensate for beam handoff. Furthermore, Martin disclosed an electronic beam steering using this phased array antenna, and the ASN may also include an adapter that mechanically adjusts the orientation of the antenna to direct the beams to the cells in the service region in response to aircraft movement to direct the beams to the cells (e.g., see col. 2). Martin, however, did not explicitly detail that the direction of the antenna was steered based on the route data. It would have been obvious to one of ordinary skill in the art to recognize that the association information between beams and service cells that stored in the memory was obviously some kind of route data because this information was accessed and used by the packet switch to compensate for beam handoff.

9. As to claims 2-4 and 8, Martin disclosed the mobile node steers its directional antennas to establish direct link (e.g., see col. 4, lines 35-37) with at least two other mobile nodes along a path (orbit 30) between the network interface (gateway 22) and the mobile platform (aircraft) (see Fig. 1, col. 4, lines 35-37).

10 As to claims 5-7, Martin disclosed wherein the route data is transmitted from the network interface to the mobile node, received via an directional antenna, from other mobile nodes (airborne switching node) within a predetermined distance of the mobile node (service area or region) (see col. 9, lines 33-59).

10. As to claim 9, Martin disclosed wherein the mobile node is a relay (e.g., see relay 110 of Fig. 3).

11. As to claims 11-12, Martin disclosed wherein the network interface access provides access to a plurality of services including digital broadcast service, the Internet and electronic mail (e.g., see col. 2 (lines 32-36) and col. 3 , line 10).

12. As to claim 13, Martin disclosed wherein the network interface is a ground-based communication system (see 22 of Fig. 1).

13. As to claim 14-15, Martin disclosed wherein the ground-based communications system includes a plurality of antenna to establish a plurality of link with a plurality of nodes within an area surrounding the ground-based communication system (service region 16) (e.g., see col. 4, lines 46-47).

14. As to claim 16, Martin disclosed wherein the network interface is satellite-based communications system (34 of Fig. 1, col. 4, lines 14-15).

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15. As to claims 17-19, Martin disclosed wherein the mobile platform is an aircraft (12 of Fig. 1, col. 3, line 45). Martin did not explicitly mention that his mobile platform could be a train or a boat. It would have been obvious, however, to one of ordinary skill in the art at the time the invention was made to recognize that such mobile platform is either a train or a boat would have been a matter of choice of the implementation of the platform on the mobile devices that can be any moving devices such as an aircraft, a train, a boat, or an automobile, etc.

16. As to claim 20, Martin did not explicitly mention that his signal exchanged data between an aircraft 12 and the cells 42 of the ground-base communications system included cockpit data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that specific data would have been a matter of design choice because there was nothing more than just a specific signal exchanged data.

17. As to claims 21-24, while Martin disclosed that the antenna was attached to the body of the aircraft 12, Martin did not explicitly detail that this antenna was attached to the front portion, bottom portion, top portion and rear portion of the aircraft. It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that such specific location of where to attach the antenna would have been a matter of design choice because there was nothing more than just specific location that the antenna was attached to the body of the aircraft.

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18. As to claims 25-27, while Martin disclosed the use of memory for storing association data or information between beams and serviced cells and packet switch that access this memory to compensate for beam handoff (e.g., see col. 2, lines 43-50), Martin did not explicitly mention that the association data to include latitude, longitude, altitude, time, velocity, fight plan, etc. It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that such specific information would have been a matter of design choice because there was nothing more than just detail coordination of the aircraft for establishing links with the ground-based communications system.

19. As to claims 28-29, such use of LAN coupling to user terminals to a server and the use of the server to transmit data received from the network accessed by the network interface to the user terminal are well known feature in the network communication system.

20. As to claim 30, such specific number of directional antenna (e.g., three in this case) would have been a matter of design choice also because it just tell the number of directions of the antenna.

21. Claims 31-74 are allowed.

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references are cited in the Form PTO-892 for the applicant's review.

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Krisna Lim whose telephone number is (703) 305-9672. The examiner can normally be reached on Monday-Friday from 7:30 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Glenton Burgess, can be reached at (703) 305-4772. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9700

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [glen.burgess@uspto.gov].

All Internet e-mail communication will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirement of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Office Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

kl

May 31, 2004



KRISNA LIM  
PRIMARY EXAMINER